

## The Implications of Extension of Unemployment Insurance Coverage to Self-Employment and Short Hours Work Weeks – A Microsimulation Approach

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### Purpose

This brief summarizes the main results of a behavioural micro-simulation analysis of the potential impacts of extending unemployment insurance coverage to weeks of self-employment and to weeks with short hours of employment (less than 15 hours). These weeks are not currently covered by unemployment insurance. Of particular interest is the effect of such a policy change on different socio-demographic groups and the implications for aggregate income distribution.

The study is one of a series of component studies which evaluate the UI Regular Benefits Program. Collectively, they address twelve evaluation issues relating to UI program rationale, program impacts and effects, objectives achievement and alternatives.

### Background

As the institutional form of employment changes over time, social welfare programs (including unemployment insurance) which are predicated upon a particular institutional arrangement may provide a poorer and poorer fit to labour market realities. This research was motivated by a concern that growth in “non-standard” forms of employment may mean that the present structure of the UI program is not adequately meeting the income support needs of a growing proportion of the labour force.

There has, for example, been significant growth in the number of labour-force participants calling themselves “self-

employed”. It may be, however, that many of these individuals are effectively disintegrated wage labourers rather than independent contractors. In cases where individuals are nominally self-employed, but selling their services to a single buyer who exercises substantial control over the pace, quality and direction of their work, the power of the “labour services purchaser” to dictate the amount and type of work effort may be indistinguishable from that of an “employer”. From the worker’s perspective, however, there is at least one very important difference: the employee whose services are no longer required is eligible for unemployment insurance benefits while the “independent contractor” is not.

Similarly, under 1994 UI regulations, an individual who puts together an employment package of several low-wage jobs, each of which has less than 15 hours of work per week, is ineligible for unemployment insurance protection from an interruption in employment. Thus, for some, bad luck in the labour market means bad luck in terms of income support available.

### Methodology and Data

To investigate the implications of extending UI to cover self-employment and weeks with short hours of employment, the authors use the “1990’s version” of the Dalhousie UI microsimulation model. A key advantage of this model is that it incorporates behavioural responses to program changes. For example, would more people choose to remain outside of

the labour force if there was a cut in unemployment insurance benefits? Such behavioural changes would affect understanding of the impacts of the program change.

The Dalhousie model is based on 54 behavioural equations in 8 separate behavioural modules, together with many accounting relationships. Behavioural equations are estimated using the 1988/89 Labour Market Activity Survey (LMAS) and simulations are run using a population of respondents to the 1990 LMAS. The model predicts whether or not each individual will be in the labour force and if so, the number of weeks; whether the individual is unemployed with the corresponding duration; whether he/she is able to obtain as many weeks of work as desired or whether demand constraints limit employment options; whether he/she has self-employment weeks including the duration; and the number of employment weeks with short hours.

Each behavioural equation takes account of the influence of: (1) measurable individual characteristics (including age, education, and past experiences), some characteristics of the labour market within which individuals reside, and the parameters of UI legislation relevant to the individual; (2) the influence of unobserved personal heterogeneity in characteristics which causes permanent deviations from the outcomes expected on the basis of personal observable characteristics; and (3) stochastic year to year variations in individual outcomes which cannot be explained by (1) or (2). The authors estimate behavioural equations separately for different demographic groups to take account of differences by age, gender and marital status.

Simulations proceed by comparing, for each individual, two scenarios: an employment/unemployment/not in the labour force work history under the 1994 UI regulations and a work history in which self-employment and short work weeks become eligible for UI coverage. Each individual's work history is

simulated for ten years, 1994 to 2004. The model includes explicitly the probability that some weeks of employment will be weeks of self-employment or weeks with short hours of work (less than or equal to 15). The simulations assume that trends to higher rates of self-employment observed during the 1980's will continue through the 1990's. An increase of 6 percentage points is projected for the fraction of the labour force self-employed by 2004. A similar trend was not incorporated for short hours as there was insufficient data to observe such a trend, if indeed one exists. Aggregate unemployment rates were based on long-term Informetrica forecasts and results were tested for sensitivity to this choice.

The authors caution that since their purpose was to examine the implications of non-coverage by unemployment insurance of self-employment and weeks with short hours, they are modelling the distribution and duration of real spells of such employment, as captured by individuals' responses to the 1988 to 1990 Labour Market Activity Survey. Their simulations attempt to describe what would happen to the unemployment insurance system if UI coverage were extended to cover these non-standard employment situations and if there was no fraud. Human Resources Development Canada would face a major administrative challenge if it extended UI coverage to self-employment weeks, since it would be essential to have some way of distinguishing between real and fraudulent reported weeks of self-employment.

## Key Findings

The impact of extending UI coverage depends on whether an individual has enough additional weeks of covered employment to make any difference to his/her eligibility or potential duration of benefits, and whether or not the individual claims benefits. People who have relatively few weeks of employment of any sort will not meet the minimum entrance requirement for their economic region either



before or after the extension of UI coverage. As a consequence, *the extension of UI coverage to self-employment and short hours work weeks makes little difference to the UI benefits or UI coverage of the poorest decile of the earnings distribution.*

Conversely, individuals who either do not experience unemployment or who are already eligible for UI coverage on the basis of weeks of UI covered employment receive relatively little benefit from the extension of coverage. Although there are some gainers from the extension of UI coverage in each decile of income distribution, there are relatively few among the upper deciles of the income distribution, in part because individuals who are in the top deciles of the earnings distribution have less unemployment, and less UI.

*The extension of unemployment insurance coverage would, however, have major benefits for the "lower middle class".* The second and third deciles of the earnings distribution are favourably affected. Both as a percentage of total labour force participants and as a percentage of the total additional cost of the UI system, the second and third deciles are the major winners. As a percentage of total labour force participants, for example, 66 and 51 percent of the second and third deciles, respectively, would gain UI coverage as a result of the policy change. This compares with 15 to 20 percent in higher deciles and only 4 per cent in the first decile.

Relative to the differences between income classes, the differences in impacts of extended UI coverage among age cohorts and provinces are comparatively small. Not surprisingly, however, *cohorts aged 16 to 24 and aged 25 to 34 have a higher fraction gaining UI coverage than do older cohorts.* Ontario has the highest net gain from extending UI coverage, but *Newfoundland and the Western provinces (particularly Saskatchewan and Manitoba) in fact have the highest percentage of the labour force newly covered.*

It is also important to point out that *a majority of the beneficiaries from extended UI coverage would be women.* This is reasonable given the higher probability of women employed in non-standard work arrangements.

*Extending unemployment insurance coverage to self-employment weeks and short hour work weeks would measurably decrease aggregate inequality,* as measured by such indices as the Gini ratio or the coefficient of variation. The impact on aggregate inequality is an average of the profound impact on the second to fourth deciles of the earnings distribution and the much smaller impacts on the poorest and richest deciles of the income distribution. As a result, changes in the Gini ratio do not appear dramatic. They are, nonetheless, large enough to be socially significant. The difference between 1994 UI regulations and a situation where UI is extended to cover non-standard employment in the Gini index in the present value of pre-tax income in 1994 was about .06. By 2004, the difference was .08. (Changes at the second decimal level can indicate important changes in inequality.)

Self-employment and short hours work weeks are still a minority phenomenon in the Canadian labour market and the relative pay of self-employment and short hours work weeks is fairly low. The model suggests that by extending coverage of UI, benefits paid to individuals with newly covered weeks would have amounted to about \$ 2.2 billion in 1994. Premiums would have covered 64 percent of this, leaving a net cost of about \$ 800 million. Projections to 2004 indicate that extending coverage would increase the net costs of the system by a relatively small percentage.

## Biographical Notes

**Lars Osberg** is a Professor of Economics at Dalhousie University and a Director of the Canadian Employment Research Forum. He is an acknowledged authority in labour economics, macroeconomics, applied econometrics, as well as economic and social policy. He has published extensively on unemployment, UI, labour mobility, earnings and wealth distribution, and measurement of economic well-being, among other subjects. His books on economic inequality make him one of the best known experts on issues related to income distribution and redistribution.

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